

6.(Amended) A [The] leptin receptor (OB-R) polypeptide [of Claim 1] which is selected from the group consisting of:

- a. N-terminal corresponding to OB-Ra through Lys⁸⁸⁹ and C-terminal to a C-terminal selected from the group consisting of OB-Rb, OB-Rc, and OB-Rd after Lys⁸⁸⁹;
- b. N-terminal corresponding to OB-Rb or OB-Rc through Lys⁸⁸⁹, and C-terminal corresponding to OB-Ra or OB-Rd after Lys⁸⁸⁹;
- c. N-terminal corresponding to OB-Rd through Lys⁸⁸⁹, and C-terminal corresponding to OB-Ra, OB-Rb, or OB-Rc after Lys⁸⁸⁹;
- d. N-terminal corresponding to SEQ ID NO:55 [OB-R] from Pro⁶⁶⁴ to Lys⁸⁸⁹, and C-terminal corresponding to OB-Ra, OB-Rb, OB-Rc, or [and] OB-Rd from Lys⁸⁸⁹;
- e. N-terminal corresponding to SEQ ID NO:55 [OB-R] from Met⁷³³ to Lys⁸⁸⁹, and C-terminal corresponding to OB-Ra, OB-Rb, OB-Rc, or [and] OB-Rd from Lys⁸⁸⁹;
- f. N-terminal selected from the group consisting of OB-Ra, OB-Rb, OB-Rd, and OB-R from Pro⁶⁶⁴ [,] to His⁷⁹⁶, and OB-Re from His⁷⁹⁶;
- g. N-terminal corresponding to SEQ ID NO:55 [OB-R] from Met⁷³³ to His⁷⁹⁶, and OB-Re from His⁷⁹⁶ [,or allelic variants thereof.]; and
- h) allelic variants of any of subparts a) through g).

7.(Amended) A [The] leptin receptor (OB-R) polypeptide [of Claim 1] wherein

- a) the N-terminal sequence is selected from the group consisting of
 - i. amino acid residues 1-889;
 - ii. amino acid residues 23-889;
 - iii. amino acid residues 28-889;
 - iv. amino acid residues 133-889;
 - v. amino acid residues 733-889;
 - vi. amino acid residues 1-796;
 - vii. amino acid residues 23-796;

- viii. amino acid residues 28-796;
 ix. amino acid residues 133-796; [and]
 x. amino acid residues 733-796; and
 xi) allelic variants of any of subparts i) through x); and
 b) the C-terminal sequence is selected from the group consisting of
 i) SEQ ID NO:11;
 ii) SEQ ID NO:12;
 iii) SEQ ID NO:13;
 iv) SEQ ID NO:14; [and]
 v) SEQ ID NO:15; and
 vi) allelic variants of any of subparts i) through v);

wherein the numbering in subpart a) is based on the amino acid sequence of SEQ ID NO:55 [the full length transcribed murine leptin receptor, including the signal peptide, or allelic variants thereof].

8.(Amended) A [The] leptin receptor (OB-R) polypeptide [of Claim 1] which is a soluble receptor.

9.(Amended) The soluble leptin receptor of Claim 8 which is selected from the group consisting of

- a) OB-Re;
 b) an N-terminal sequence which is selected from the group consisting of:
 i) OB-Ra,
 ii) OB-Rb,
 iii) OB-Rd, and
 iv) corresponding to SEQ ID NO:55 [OB-R] from Pro⁶⁶⁴, through His⁷⁹⁹, and
 a C-terminal sequence which is OB-Re from His⁷⁹⁶; and
 v) allelic variants of any of subparts i) through iv);

c) an N-terminal sequence which is selected from the group consisting of

- i) amino acid residues 1-796;
- ii) amino acid residues 23-796;
- iii) amino acid residues 28-796;
- iv) amino acid residues 133-796; [and]
- v) amino acid residues 733-796; and
- vi) allelic variants of any of subparts i) through v): and

a C-terminal sequence which is SEQ ID NO:15;

wherein the numbering in subparts b) and c) is based on the amino acid sequence of SEQ ID NO:55 [the full length transcribed murine leptin receptor, including the signal peptide, or allelic variants thereof].

14. (Amended) A [The] leptin receptor polypeptide, which is a human leptin receptor and which comprises [of Claim 12 comprising] an amino acid substitution selected from the group consisting of: Phe for Ser³⁶; Asp for Tyr⁴⁴; Ser for Leu⁴⁹; Pro for Ser⁵⁴; Leu for Ser⁶⁰; Ala for His⁶³; Ala for Thr⁶⁶; Ala for Pro⁷⁰; Ile for Thr⁷⁷; Tyr for His⁷⁸; Pro for Ser⁸⁰; Gly for Arg⁹²; Gly for Asp⁹⁶; Thr for Ala¹⁰³ or Ile¹⁰⁶; Ser for Leu¹¹⁸; Gly for Asp¹²⁴; Thr for Lys¹³⁸; Pro for Ser¹⁴⁶; Asp for Val¹⁶⁴; Leu for Gln¹⁷⁷; Asp for Gly¹⁷⁹; Gly for Glu¹⁹²; deletion for Cys¹⁹³; His for Leu¹⁹⁷; Ser for Ile²²¹; Leu for Asn²³³; Leu for Ser²⁷³; deletion for Thr²⁷⁸; Ala for Asp²⁸⁵; Glu for Lys²⁸⁶; Ser for Gly³¹⁰; Arg for Met³⁷⁰; Ile for Ser³⁷⁹; Ser for Phe³⁹⁴; Ala for Glu⁴¹⁷; Gly for Glu⁴⁵⁹; Ser for Ile⁴⁷⁶; Thr for Ile⁴⁸²; Thr for Ile⁵⁵¹; His for Tyr⁵⁸⁶; Lys for Ile⁶⁴⁸; Ala for Ser⁶⁸⁶; His for Cys⁶⁸⁷; Thr for Ile⁷⁵⁹; Ile for Asn⁷⁷⁶; Asp for Gly⁷⁸¹; Gly for Glu⁷⁸²; Gly for Ser⁸²⁷; Ala for Asp⁸³²; Arg for Pro⁸⁹²; Thr for Glu⁸⁹³; Asp for Thr⁸⁹⁴; or Leu for Glu⁸⁹⁶, wherein the numbering of the amino acids corresponds to the numbering adopted for SEQ ID NO:56 [the human leptin receptor, including the signal sequence].

Please add the following claims:

67. The leptin receptor of any of Claims 3-9 and 14 which is a human leptin receptor.